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EXAMINER	
DONDERO, WILLIAM E	

ART UNIT	PAPER NUMBER
3654	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/580,238	COSTROP ET AL.	
	Examiner	Art Unit	
	WILLIAM E. DONDERO	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-36* is/are pending in the application.

4a) Of the above claim(s) *25 and 26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-24 and 27-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 May 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/23/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of Species II, Figures 9-13, Claims 19-24, and 27-36 in the reply filed on February 26, 2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 25-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 26, 2009.

With respect to the Restriction Requirement mailed June 4, 2009, Applicant's arguments filed July 2, 2009 are found persuasive; and therefore, the Restriction Requirement mailed June 4, 2009 is withdrawn.

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are not black and white line drawing and the shading obscures them, particularly Figures 7-13. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to

the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the nearly tension free loop (Claims 19, 22, 31, 32) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 19 is objected to because of the following informalities: the first word of each bullet (-) should be lower case. Appropriate correction is required.

Claim 31 is objected to because of the following informalities: - -L- - should be inserted before "2" in line 18. Appropriate correction is required.

All claims should be revised carefully to correct all other deficiencies similar to the ones noted above.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19-24 and 27-36 are, rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 19, the limitation, "a nearly tension free loop" in lines 7-8 renders the claim indefinite because the phrase "nearly tension free" implies there is some tension and therefore a loop would not be formed.

Further regarding Claim 19, the notation "L1 > max (50mm, P/4)" in line 18 renders the claim indefinite, because it is not clear what this notation means. For the

purpose of the Office Action below, it is presumed the notation means the length, L1, is greater than the maximum of 50 mm or the width of the print medium divided by 4.

Also regarding Claim 19, the notation "L2 > 2/3 * max (50mm, P/4)" in line 31 renders the claim indefinite, because it is not clear what this notation means. For the purpose of the Office Action below, it is presumed the notation means the length, L2, is greater than two thirds of the maximum of 50 mm or the width of the print medium divided by 4.

Regarding Claim 21, the limitation, "a finite second web movement trajectory (Lguided)" in lines 1-2 renders the claim indefinite because it is unclear whether it is the same trajectory as in lines 24-25 of Claim 19 or a different trajectory. For the Office Action below, it is presumed it is the same trajectory and that "Lguided" should be - -L2- -.

Further regarding Claim 21, the notation "Lguided > max (50mm, mediumwidth/4)" in lines 2-3 renders the claim indefinite, because it is not clear what this notation means. For the purpose of the Office Action below, it is presumed the notation means the length, Lguided, is greater than the maximum of 50 mm or the width of the print medium divided by 4.

Regarding Claim 30, the limitation, "said finite second web movement trajectory (Lguided)" in lines 1-2 renders the claim indefinite because it is unclear whether it is the same trajectory as in lines 24-25 of Claim 19 or a different trajectory. For the Office

Action below, it is presumed it is the same trajectory and that "Lguided" should be - -L2- -.

Further regarding Claim 30, the notation "Lguided > max (50mm, mediumwidth/4)" in lines 2-3 renders the claim indefinite, because it is not clear what this notation means. For the purpose of the Office Action below, it is presumed the notation means the length, Lguided, is greater than the maximum of 50 mm or the width of the print medium divided by 4.

Regarding Claim 31, the limitation, "a nearly tension free loop" in line 7 renders the claim indefinite because the phrase "nearly tension free" implies there is some tension and therefore a loop would not be formed.

Further regarding Claim 31, the notation "L1 > max (50mm, P/4)" in line 11 renders the claim indefinite, because it is not clear what this notation means. For the purpose of the Office Action below, it is presumed the notation means the length, L1, is greater than the maximum of 50 mm or the width of the print medium divided by 4.

Also regarding Claim 31, the notation "L2 > 2/3 * max (50mm, P/4)" in line 18 renders the claim indefinite, because it is not clear what this notation means. For the purpose of the Office Action below, it is presumed the notation means the length, L2, is greater than two thirds of the maximum of 50 mm or the width of the print medium divided by 4.

Regarding Claim 35, the limitation, "said finite second web movement trajectory (Lguided)" in lines 1-2 renders the claim indefinite because it is unclear whether it is the same trajectory as in line 14 of Claim 31 or a different trajectory. For the Office Action below, it is presumed it is the same trajectory and that "Lguided" should be - -L2- -.

Further regarding Claim 35, the notation "Lguided > max (50mm, mediumwidth/4)" in lines 2-3 renders the claim indefinite, because it is not clear what this notation means. For the purpose of the Office Action below, it is presumed the notation means the length, Lguided, is greater than the maximum of 50 mm or the width of the print medium divided by 4.

All claims should be revised carefully to correct all other deficiencies similar to the ones noted above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19-24 and 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chisholm et al. (US-3955772). Regarding Claim 19, Chisholm et al. disclose a web alignment device capable of aligning a web 11 of continuous print medium having two outer edges and originating from an upstream device to a stable

lateral position with respect to a printing system for further printing on the continuous web, the printing system having a drive system downstream of the web alignment device, the alignment device comprising mechanical means 17 (farthest to the right in Figure 1) for defining an entry position of a web, the web contacting the mechanical means in sliding, the web being supplied as a nearly tension free loop (coil of web 11); braking means 59 to reduce the tension-force per unit of medium width at the end of an alignment zone (defined by 23,25) compared to the tension force per unit of medium width downstream as exerted by the drive system of the printing system; means 17 (other three) defining a curved or partially curved first web movement trajectory including areas where the print medium slides in friction contact with a curved surface (surface of the rollers), the means for defining the curved or partially curved first web trajectory being located upstream of the braking means, the sliding zone of the curved or partially curved first web movement trajectory extending over a finite length; adjustable lateral guiding means with side guides 23,25 on both side edges of the web adjustable in width to contact at either of the two outer edges or at both outer edges of the print medium, thus limiting the lateral movement dimension available for the print medium in two opposing directions, the adjustable guiding means extending over a finite second web movement trajectory of the print medium, wherein the finite second web movement trajectory with side guides on both side edges of the web extends in the upstream direction to further than the means for defining the entry position and comprises at least a portion of the first trajectory where the print medium is in sliding contact with the means defining the curved or partially curved first trajectory, being the

length of simultaneous side-guiding and support for sliding (Figures 1-4). Chisholm et al. does not expressly disclose specific relationships for the finite first and second web movement trajectories.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the finite first web movement trajectory greater than the maximum of 50 mm or the width of the print medium divided by 4 and the finite second web movement trajectory greater than two thirds of the maximum of 50 mm or the width of the print medium divided by 4 to achieve the desired web alignment.

Regarding Claim 20, Chisholm et al. discloses the braking means is capable of reducing the tension-force per unit of medium width at the end of the alignment zone compared to the tension force per unit of medium width downstream as exerted by the drive system of the printing system by any factor, including at least a factor of 3 (Figures 1-4).

Regarding Claim 21 and 30, Chisholm et al. does not expressly disclose specific relationships for the finite second web movement trajectories.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the

optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the finite second web movement trajectory greater than the maximum of 50 mm or the width of the print medium divided by 4 to achieve the desired web alignment.

Regarding Claim 22, Chisholm et al. disclose the nearly tension free loop has a tension of 0 N/m per gram per square meter of web material (if there was any tension the material would not form a loop), which is less than 2×10^{-2} N/m per gram per square meter of web material (Figures 1-4).

Regarding Claim 23, Chisholm et al. disclose the entry position defining means comprises one friction inducing roller 17 (farthest to the right in Figure 1) that increases the paper tension in the alignment section above a minimum tension (Figures 1-4). Chisholm et al. does not expressly disclose specific value for the minimum tension.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the minimum tension 6 N/m to achieve the desired web alignment.

Regarding Claim 24, Chisholm et al. disclose the means for defining the curved or partially curved first movement trajectory comprises one or more fixed rollers 17

(other three) that contact the web over at least a part of its width and wherein at least one of these fixed rollers has a radius of curvature (Figures 1-5). Chisholm et al. does not expressly disclose specific value for the radius of curvature.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the radius of curvature exceed 32 mm to achieve the desired web alignment.

Regarding Claim 31, Chisholm et al. disclose a method to align web of continuous print medium originating from an upstream device to a stable lateral position with respect to a printing system for further printing on the continuous web, the printing system comprising a drive system, the method comprising guiding a print medium 11 at a reduced tension of the print medium compared to the downstream tension imposed by a drive of the printing system, such that the print medium forms a nearly free loop (coil of medium 11) prior to entering into sliding contact in a sliding zone along a means 17 (three to the left in Figure 1) defining a curved or partially curved first web movement trajectory in the web travel direction, the sliding zone of the curved or partially curved first web trajectory extending over a finite length, centering the print medium by guiding both lateral edges in the lateral direction by adjustable lateral guiding means 23,25 along a finite second web movement trajectory that comprises at least a part of the first

trajectory where the print medium is in friction sliding contact with the means defining the curved or partially curved trajectory, being the length of simultaneous side-guiding and support for sliding length of the second trajectory (Figures 1-4). Chisholm et al. does not expressly disclose specific relationships for the finite first and second web movement trajectories.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the finite first web movement trajectory greater than the maximum of 50 mm or the width of the print medium divided by 4 and the finite second web movement trajectory greater than two thirds of the maximum of 50 mm or the width of the print medium divided by 4 to achieve the desired web alignment.

Regarding Claim 32, Chisholm et al. disclose the nearly tension free loop has a tension of 0 N/m per gram per square meter of web material (if there was any tension the material would not form a loop), which is less than 2×10^{-2} N/m per gram per square meter of web material (Figures 1-4).

Regarding Claims 33-34, Chisholm et al. does not expressly disclose the adjustable lateral guiding means are adjusted to a distance satisfying a particular relation compared to the medium width.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to adjust the lateral guides to a distance between the width of the medium and the width of the medium minus 2 mm or between the width of the medium and the width of the medium minus 1 mm to achieve the desired web alignment.

Regarding Claim 35, Chisholm et al. does not expressly disclose specific relationships for the finite second web movement trajectories.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the finite second web movement trajectory greater than the maximum of 50 mm or the width of the print medium divided by 4 to achieve the desired web alignment.

Regarding Claim 36, Chisholm et al. discloses a braking means 59 is capable of reducing the tension-force per unit of medium width at the end of an alignment zone (defined by 23,25) compared to the tension force per unit of medium width downstream as exerted by the drive system of the printing system by any factor, including at least a factor of 3 (Figures 1-4).

Claims 19-24 and 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taubenberger (US-5685471) in view of Kamimura (US-4750660). Regarding Claim 19, Taubenberger discloses a web alignment device capable of aligning a web 11 of continuous print medium having two outer edges and originating from an upstream device to a stable lateral position with respect to a printing system *DA* for further printing on the continuous web, the printing system having a drive system 8 downstream of the web alignment device, the alignment device comprising mechanical means (entry to 3/5) for defining an entry position of a web, the web contacting the mechanical means in sliding, the web being supplied as a nearly tension free loop 12; braking means 6,7 to reduce the tension-force per unit of medium width at the end of an alignment zone (defined by 3/5) compared to the tension force per unit of medium width downstream as exerted by the drive system of the printing system; means 4 defining a curved or partially curved first web movement trajectory including areas where the print medium slides in friction contact with a curved surface (surface of 4), the means for defining the curved or partially curved first web trajectory being located upstream of the braking means, the sliding zone of the curved or partially curved first web movement trajectory extending over a finite length; lateral guiding means with side guides 5 (disclosed can be on either side, see Column 3, Lines 39-49) on both side edges of the web adjustable in width to contact at either of the two outer edges or at both outer edges of the print medium, thus limiting the lateral movement dimension available for the print medium in two opposing directions, the adjustable guiding means extending

over a finite second web movement trajectory of the print medium, wherein the finite second web movement trajectory with side guides on both side edges of the web extends in the upstream direction to further than the means for defining the entry position and comprises at least a portion of the first trajectory where the print medium is in sliding contact with the means defining the curved or partially curved first trajectory, being the length of simultaneous side-guiding and support for sliding (Figures 1-2). Taubenberger does not expressly disclose specific relationships for the finite first and second web movement trajectories, two guide being used on both sides of the print medium, and the guides being adjustable.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the finite first web movement trajectory greater than the maximum of 50 mm or the width of the print medium divided by 4 and the finite second web movement trajectory greater than two thirds of the maximum of 50 mm or the width of the print medium divided by 4 to achieve the desired web alignment.

Further, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement a predictable variation (i.e. use two guides on each side of the print medium) when combining two embodiments disclosed in the prior art (Taubenberger) to achieve more precise alignment. Boston Scientific v. Cordis, 554 F.3d 892, 991 (Fed. Cir., 2009).

Additionally, Kamimura teaches adjusting alignment guides 39,40 (Figures 1-3). It would have been obvious to one of ordinary skill in the art at the time of the of invention to make the lateral guides of Taubenberger adjustable to make the device more versatile allowing it to guide mediums of different widths as taught by Kamimura.

Regarding Claim 20, Taubenberger discloses the braking means is capable of reducing the tension-force per unit of medium width at the end of the alignment zone compared to the tension force per unit of medium width downstream as exerted by the drive system of the printing system by any factor, including at least a factor of 3 (Figures 1-3).

Regarding Claim 21 and 30, Taubenberger in view of Kamimura does not expressly disclose specific relationships for the finite second web movement trajectories.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the finite second web movement trajectory greater than the maximum of 50 mm or the width of the print medium divided by 4 to achieve the desired web alignment.

Regarding Claim 22, Taubenberger discloses the nearly tension free loop has a tension of 0 N/m per gram per square meter of web material (if there was any tension the material would not form a loop), which is less than 2×10^{-2} N/m per gram per square meter of web material (Figures 1-3).

Regarding Claim 23, Taubenberger discloses the entry position defining means comprises one friction inducing roller 2 that increases the paper tension in the alignment section above a minimum tension (Figures 1-3). Chisholm et al. does not expressly disclose specific value for the minimum tension.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the minimum tension 6 N/m to achieve the desired web alignment.

Regarding Claim 24, Chisholm et al. disclose the means for defining the curved or partially curved first movement trajectory comprises a curved shell 3/5 that contacts the web over at least a part of its width and wherein at least one of these fixed rollers has a radius of curvature (Figures 1-5). Chisholm et al. does not expressly disclose specific value for the radius of curvature.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the

optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the radius of curvature exceed 32 mm to achieve the desired web alignment.

Regarding Claim 27, Taubenberger discloses additional flexing means 4 (upper) that prevent wrinkles being formed in the web when in the alignment device (Figures 1-2).

Regarding Claim 31, Taubenberger discloses a method to align web 11 of continuous print medium originating from an upstream device (supporting 11) to a stable lateral position with respect to a printing system *DA* for further printing on the continuous web, the printing system comprising a drive system 8, the method comprising guiding a print medium 11 at a reduced tension of the print medium compared to the downstream tension imposed by a drive of the printing system, such that the print medium forms a nearly free loop 12 prior to entering into sliding contact in a sliding zone along a means 4 defining a curved or partially curved first web movement trajectory in the web travel direction, the sliding zone of the curved or partially curved first web trajectory extending over a finite length, centering the print medium by guiding both lateral edges (disclosed can be on either side, see Column 3, Lines 39-49) in the lateral direction by guiding means 5 along a finite second web movement trajectory that comprises at least a part of the first trajectory where the print medium is in friction

sliding contact with the means defining the curved or partially curved trajectory, being the length of simultaneous side-guiding and support for sliding length of the second trajectory (Figures 1-4). Taubenberger does not expressly disclose specific relationships for the finite first and second web movement trajectories, two guide being used on both sides of the print medium, and the guides being adjustable.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the finite first web movement trajectory greater than the maximum of 50 mm or the width of the print medium divided by 4 and the finite second web movement trajectory greater than two thirds of the maximum of 50 mm or the width of the print medium divided by 4 to achieve the desired web alignment.

Further, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement a predictable variation (i.e. use two guides on each side of the print medium) when combining two embodiments disclosed in the prior art (Taubenberger) to achieve more precise alignment. Boston Scientific v. Cordis, 554 F.3d 892, 991 (Fed. Cir., 2009).

Additionally, Kamimura teaches adjusting alignment guides 39,40 (Figures 1-3). It would have been obvious to one of ordinary skill in the art at the time of the of invention to make the lateral guides of Taubenberger adjustable to make the device more versatile allowing it to guide mediums of different widths as taught by Kamimura.

Regarding Claim 32, Taubenberger disclose the nearly tension free loop has a tension of 0 N/m per gram per square meter of web material (if there was any tension the material would not form a loop), which is less than 2×10^{-2} N/m per gram per square meter of web material (Figures 1-2).

Regarding Claims 33-34, Taubenberger in view of Kamimura does not expressly disclose the adjustable lateral guiding means are adjusted to a distance satisfying a particular relation compared to the medium width.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to adjust the lateral guides to a distance between the width of the medium and the width of the medium minus 2 mm or between the width of the medium and the width of the medium minus 1 mm to achieve the desired web alignment.

Regarding Claim 35, Taubenberger in view of Kamimura does not expressly disclose specific relationships for the finite second web movement trajectories.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been

obvious through routine experimentation and optimization, for one of ordinary skill in the art to make the finite second web movement trajectory greater than the maximum of 50 mm or the width of the print medium divided by 4 to achieve the desired web alignment.

Regarding Claim 36, Taubenberger discloses a braking means 6,7 is capable of reducing the tension-force per unit of medium width at the end of an alignment zone (defined by 3/5) compared to the tension force per unit of medium width downstream as exerted by the drive system of the printing system by any factor, including at least a factor of 3 (Figures 1-2).

Allowable Subject Matter

Claims 28-29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM E. DONDERO whose telephone number is (571)272-5590. The examiner can normally be reached on M - F 7 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Q. Nguyen can be reached on 571-272-6952. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WILLIAM E DONDERO/
Examiner, Art Unit 3654